Freshwater Biology

Volume 42, 1999

Edited by
A. G. Hildrew and C. R. Townsend

b
Blackwell
Science

© 1999 Blackwell Science Ltd

Published by Blackwell Science Ltd
Osney Mead, Oxford OX2 0EL
25 John Street, London WCIN 2BL
23 Ainslie Place, Edinburgh EH3 6AJ
350 Main Street, Malden, MA 02148-5018, USA
54 University Street, Carlton, Victoria 3053, Australia

Other Editorial Offices:
Blackwell Wissenschafts-Verlag GmbH, Kurfürstendam 57, D-10707, Berlin, Germany

Blackwell Science Ltd, 10 rue Casimir Delavigne, 75006 Paris, France

Blackwell Science KK, MG Kodenmacho Building, 7-10 Kodenmacho, Nihombashi, Chou-ku, Tokyo 104, Japan

Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Blackwell Science for libraries and other users registered with the Copyright Clearance Centre (CCC) Transactional Reporting Service, provided that the base fee of $14.00 per copy is paid directly to CCC, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, USA. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Editor, *Freshwater Biology* ISSN 0046-5070/99 $14.00.

Freshwater Biology is covered by *Current Contents, ASFA, Science Citation Index, Chemical Abstracts* and *EmBASE/Excerpta Medica/ Biobase/Current Awareness in Biological Sciences.*

ISSN 0046-5070

Typeset by Deerpark Publishing Services Ltd, Shannon, Ireland and printed by Information Press, Oxford, U.K.

Contents

Volume 42, Number 1, August 1999

Original Articles

1 *Kirsten A. Work and Moshe Gophen:* Factors which affect the abundance of an invasive cladoceran, (*Daphnia lumholtzi*), in U.S. reservoirs

11 *Robert A. Briers and Philip H. Warren:* Competition between the nymphs of two regionally co-occurring species of *Notonecta* (Hemiptera: Notonectidae)

21 *Peder M. Yurista:* Temperature-dependent energy budget of an Arctic Cladoceran, *Daphnia middendorffiana*

35 *Wendell R. Haag and Melvin L. Warren Jr:* Mantle displays of freshwater mussels elicit attacks from fish

41 *Christoph D. Matthaei, Kathi A. Peacock and Colin R. Townsend:* Scour and fill patterns in a New Zealand stream and potential implications for invertebrate refugia

59 *Todd J. Morris and Lynda D. Corkum:* Unionid growth patterns in rivers of differing riparian vegetation

69 *Thomas G. Horvath and Gary A. Lamberti:* Mortality of zebra mussel, *Dreissena polymorpha*, veligers during downstream transport

77 *A. L. Ooms-Wilms, G. Postema and R. D. Gulati:* Population dynamics of planktonic rotifers in Lake Loosdrecht, the Netherlands, in relation to their potential food and predators

99 *Kyeongsik Rhew, Robert M. Baca, Clifford A. Ochs and Stephen T. Threlkeld:* Interaction effects of fish, nutrients, mixing and sediments on autotrophic picoplankton and algal composition

111 *Christoph Vorburger and Georg Ribi:* Aggression and competition for shelter between a native and an introduced crayfish in Europe

121 *S. Nandini and S. S. S. Sarma:* Effect of starvation time on the prey capture behaviour, functional response and population growth of *Asplanchna sieboldi* (Rotifera)

Opinion

131 *Peter W. Cullen, Richard H. Norris, Vincent H. Resh, Trefor B. Reynoldson, David M. Rosenberg and Michael T. Barbour:* Collaboration in scientific research: a critical need for freshwater ecology

Applied Issues

143 *Klaus Peter Brodersen and Claus Lindegaard:* Classification, assessment and trophic reconstruction of Danish lakes using chironomids

159 *D. L. Findlay, S. E. M. Kasian, M. T. Turner and M. P. Stainton*: Responses of phytoplankton and epilithon during acidification and early recovery of a lake

177 *Sylvie Mérigoux and Dominique Ponton:* Spatiotemporal distribution of young fish in tributaries of natural and flow-regulated sections of a neotropical river in French Guiana

199 **Book Reviews**

Volume 42, Number 2, September 1999

Original Articles

201 *S. Voss and H. Mumm:* Where to stay by night and day: Size-specific and seasonal differences in horizontal and vertical distribution of *Chaoborus flavicans* larvae

215 *V. E. Villafañe, M. Andrade, V. Lairana, F. Zaratti and E. W. Helbling:* Inhibition of phytoplankton photosynthesis by solar ultraviolet radiation: studies in Lake Titicaca, Bolivia

225 *Chris O'Brien and Dean W. Blinn:* The endemic spring snail *Pyrgulopsis montezumensis* in a high CO_2 environment: Importance of extreme chemical habitats as refugia

© 1999 Blackwell Science Ltd.

235 *J. M. Elliott and M.A. Hurley:* A new energetics model for brown trout, *Salmo trutta*

247 *J. O. Young and T. B. Reynoldson:* Continuing dispersal of freshwater triclads (Platyhelminthes; Turbellaria) in Britain with particular reference to lakes

263 *William R. DeMott:* Foraging strategies and growth inhibition in five daphnids feeding on mixtures of a toxic cyanobacterium and a green alga

275 *Nicolas Lamouroux, Jean-Michel Olivier, Henri Persat, Marc Pooilly, Yves Souchon and Bernhard Statzner:* Predicting community characteristics from habitat conditions: fluvial fish and hydraulics

301 *Björn Malmqvist, Yixin Zhang and Peter H. Adler:* Diversity, distribution and larval habitats of North Swedish blackflies (Diptera: Simuliidae)

315 *Kaj Sand-Jensen and Ole Pederson:* Velocity gradients and turbulence around macrophyte stands in streams

329 *Karl E. Havens, Therese L. East, Soon-Jin Hwang, Andrew J. Rodusky, Bruce Sharfstein and Alan D. Steinman:* Algal responses to experimental nutrient addition in the littoral community of a subtropical lake

Applied Issues

345 *Jon S. Harding, Roger G. Young, John W. Hayes, Karen A. Shearer and John D. Stark:* Changes in agricultural intensity and river health along a river continuum

359 *Martin G. Read and Leon A. Barmuta:* Comparisons of benthic communities adjacent to riparian native eucalypt and introduced willow vegetation

375 *Annette Baattrup-Pedersen and Tenna Riis:* Macrophyte diversity and composition in relation to substratum characteristics in regulated and unregulated Danish streams

387 *Keith B. Gido and James H. Brown:* Invasion of North American drainages by alien fish species

Volume 42, Number 3, November 1999

Original Articles

401 *Irene Petersen, Julie H. Winterbottom, Stuart Orton, Nikolai Friberg, Alan G. Hildrew, D. C. Speirs and W. S. C. Gurney:* Emergence and lateral dispersal of adult Plecoptera and Trichoptera from Broadstone stream, U.K.

417 *B. Gu, V. Alexander and D. M. Schell:* Seasonal and interannual variability of plankton carbon isotope ratios in a subartic lake

427 *D. L. Nielsen, T. J. Hillman and F. J. Smith:* Effects of hydrological variation and planktivorous competition on macroinvertebrate community structure in experimental billabongs

445 *Dale A. Holen:* Effects of prey abundance and light intensity on the mixotrophic chrysophyte *Poterioochromonas malhamensis* from a mesotrophic lake

457 *Anthony Lehmann and Jean-Bernard Lachavanne:* Changes in the water quality of Lake Geneva indicated by submerged macrophytes

467 *Nathan Whitmore and Alexander D. Huryn:* Life history and production of *Paranephrops zealandicus* in a forest stream, with comments about the sustainable harvest of a freshwater crayfish

479 *Peder G. Eriksson and Jonas L. Andersson:* Potential nitrification and cation exchange on litter of emergent, freshwater macrophytes

487 *Ram Kumar and T. Ramakrishna Rao:* Demographic responses of adult *Mesocyclops thermocyclopoides* (Copepoda, Cyclopoida) to different plant and animal diets

503 *R. P. Barbiero, W. F. James and J. W. Barko:* The effects of disturbance events on phytoplankton community structure in a small temperate reservoir

513 *Muriel Petit, Pierre Servais and Pierre Lavandier:* Bacterial production measured by leucine and thymidine incorporation rates in French lakes

525 *John K. Jackson, Eric P. McElravy and Vincent H. Resh:* Long-term movements of self-marked caddisfly larvae (Trichoptera: Sericostomatidae) in a California coastal mountain stream

Opinion

537 *James J Elser:* The pathway to noxious cyanobacteria blooms in lakes: the food web as the final turn

Applied Issues

545 *Hendrika J. De Lange, Antonie M. Verschoor, Ronald Gylstra, Jan G. M. Cuppen and Ellen Van Donk:* Effects of artificial ultraviolet-B radiation on experimental aquatic microcosms

561 *Pedro J. Gutiérrez-Yurrita and Carlos Montes:* Bioenergetics and phenology of reproduction of the introduced red swamp crayfish, *Procambarus clarkii* in Donana National Park, Spain, and implications for species management

575 *Simon Linke, Robert C Bailey and John Schwindt:* Temporal variability of stream bioassessments using benthic macroinvertebrates

585 *Laurence Carvalho and Brian Moss:* Climate sensitivity of Oak Mere: a low altitude acid lake

593 **Book Reviews**

Volume 42, Number 4, December 1999

Original Articles

597 *Mikio Inoue and Shigeru Nakano:* Habitat structure along channel-unit sequences for juvenile salmon: a subunit-based analysis of in-stream landscapes

609 *Anne-Maree Schwarz and Stiig Markager:* Light absorption and photosynthesis of a benthic moss community: importance of spectral quality of light and implications of changing light attenuation in the water column

625 *Nikolai Friberg and Dean Jacobsen:* Variation in growth of the detritivore-shredder *Sericostoma personatum* (Trichoptera)

637 *Kevin L. Kirk, John Ellis and Jennifer Taylor:* Physiological responses to variable environments: storage and respiration in starving rotifers

645 *B. J. Robson, E. T. Chester and J. A. Davis:* Manipulating the intensity of near-bed turbulence in rivers: effects on benthic invertebrates

655 *R. Marchant and G. Hehir:* Growth, production and mortality of two species of *Agapetus* (Trichoptera: Glossosomatidae) in the Acheron River, south-east Australia

673 *Nicolas Lamouroux, Hervé Capra, Marc Pouilly and Yves Souchon:* Fish habitat preferences in large streams of southern France

Opinion

689 *Graham Harris:* This is not the end of limnology (or of science): the world may well be a lot simpler than we think

Applied Issues

707 *Ronald W. Zurawell, Brian G. Kotak and Ellie E. Prepas:* Influence of lake trophic status on the occurrence of microcystin-LR in the tissue of pulmonate snails

719 *Michio Fukushima, Noriko Takamura, Liwei Sun, Megumi Nakagawa, Kazuo Matsushige and Ping Xie:* Changes in the plankton community following introduction of filter-feeding planktivorous fish

737 *Sylvain Dolédec:* Species traits for future biomonitoring across ecoregions: patterns along a human-impacted river

759 **Book Reviews**

763 Index to Volume 42